changing their payment methods for drugs noted that they might have to raise physician administration fees to partially offset the reduced income generated for physicians."[179]

112. According to Professor Berndt: "[K]nowledgeable observers understood that physicians were able to purchase many of the Medicare Part B outpatient drugs at acquisition costs considerably less than AWP,"[180] and the difference between AWP and ASPs has long been highly visible to active industry participants.[181]

B. Payors could (and did) acquire more information

1. Payors could (and did) become involved in drug purchasing

113. Dr. Hartman assumes the only publicly available "signal" of acquisition costs was AWP[182] (without considering TPPs' involvement in drug purchasing[183]), and concludes that "TPPs must have and did look to signals for the costs."[184] However, payors could gain information on drug acquisition costs and spreads by becoming involved in drug purchasing, and some have done so. For example, private payors have acquired specialty pharmacy operations, mail order pharmacy services, or pharmacies and clinics typically through staff model HMOs,[185] or PBMs;[186] these

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[179] 2003 MedPAC Report, pp. 166–167.

[180] Berndt Report, ¶ 97.

[181] In a section discussing reports and investigations by the OIG, VA, HCFA/CMS, GAO, CBO, DHHS, Professor Berndt notes: "While it is not entirely clear why it has taken so very long for CMS to switch from AWP-based to an actual selling price (ASP)-based reimbursement, what is clear is that through these published reports and inter-agency public information exchanges, the fact that pharmacies' and providers' acquisition costs were typically less than AWP has long been made very visible and public. It has not been a secret, at least to active observers and health care industry participants" (Berndt Report, ¶ 65); see, also, Berndt Report, ¶ 74.

[182] Hartman Declaration of Dec. 16, 2004, ¶ 3 (e).

[183] Hartman Deposition, pp. 1013–1015 (Dr. Hartman did not study payors' precise affiliations with staff model HMOs or hospitals, although he acknowledges that a third-party payor should be informed by its subsidiaries that purchase drugs).

[184] Hartman Liability Report, ¶ 35.

[185] For example, Anthem had a mail-order pharmacy service called Anthem Prescription Management; see Deposition of Timothy Hopkins (Executive Director of retail, mail order, and specialty pharmacy operations, Anthem), November 30, 2004 ("Hopkins Deposition"), pp. 16, 38, 45–50, 92–93. See, also, the discussion of Anthem's specialty pharmacy services in "Specialty Pharmacy Market Offers Expansion Opportunity for PBMs," *Drug Cost Management Report*, September 12, 2003. CIGNA used

entities purchased directly from drug manufacturers or wholesalers. And "over the years the federal government has purchased a limited number of drugs in its Medicare Part B program."[187] Thus, even if there were no publicly available "price signals," payors could (and some did) inform themselves of drug acquisition costs. Any payor who had knowledge of the spreads available to physicians could not have been fraudulently deceived about such spreads.

2. Payors could (and did) require the reporting of acquisition prices

114. Very large and powerful private and public payors, including Medicare,[188] are in a position to require detailed transaction pricing data for use in determining reimbursement rates. Note that CMS, which administers Medicare and Medicaid, successfully implemented the OBRA 1990 provisions requiring reporting a type of average selling price for drugs covered by Medicaid (i.e., average manufacturer

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its specialty pharmacy service to purchase directly from manufacturers; see Herbold Deposition (CIGNA), pp. 22, 24, 63. Harvard Pilgrim owned pharmacies and physician clinics when it was a staff model HMO, and purchased PADs and SADs for them directly from manufacturers and wholesalers; see Kenney Deposition (Harvard Pilgrim Health Care), pp. 9–11. HIPNY purchased drugs for its staff model HMO pharmacies; Deposition of Araksi Sarafian (Vice President for pharmacy services, HIPNY), September 21, 2004 ("Sarafian Deposition"), pp. 8, 32–43. Humana owns two pharmacies in Florida that handle chemotherapy drugs; see March, Astara, "Brown Bagging Chemotherapy Drugs," *Oncology Issues*, Vol. 16, No. 4, July/August 2001, pp. 23–28 at 28. John Deere Health Plan purchased drugs directly from manufacturers for its staff model HMO, which operated from 1993 to 1999; see Deposition of Carol Sidwell (Manager of Provider Relations, John Deere Health Plan) , September 17, 2004 ("Sidwell Deposition"), pp. 6, 40–43.

[186] Payors who have vertically integrated into PBMs include Aetna, Anthem, CIGNA, Health Net, PacifiCare, UnitedHealthcare, WellPoint, and various Midwest Blue Cross plans. See "Health Plan Strategies for Pharmacy Benefit Management," *Managed Care Week*, May 2, 2005; "Aetna Grows PBM Business with Stand-Alone 'Carve Back' Clients," *Drug Benefit News*, March 11, 2005; "Blues-owned PBMs Primarily Serve Blues HMO Markets – Pharmacy Benefit Management," *Drug Cost Management Report*, August 2002; Elswick, Jill, "Rx-only Consumer-driven Plans Hit Market," *Employee Benefit News*, December 2003; PricewaterhouseCoopers, *Study of Pharmaceutical Benefit Management*, HCFA Contract No. 500-97-0399/0097, June 2001, p. 35; "Aetna Takes Mail-order In-House; Ends Contract with Express Scripts," *Drug Cost Management Report*, November 2002; and "MN Blues Plan Looks Beyond McKesson Deal to Build Specialty Pharmacy Program," *Specialty Pharmacy News*, Vol. 2, No. 11, November 2005, pp. 1–3 at 1.

[187] Berndt Report, ¶ 32.

[188] MedPAC noted that: "Because there is no official calculation method, CMS potentially can use alternate sources of information like market surveys to establish new AWPs for setting Medicare payment rates. These rates could be tied to actual transaction prices." 2003 MedPAC Report, p. 152.

prices—AMPs), a program which covers both SADs and PADs.[189] The government also has the ability to engage in price discovery for SADs and PADs through the Federal Supply Schedule ("FSS") and Medicaid Best Price provisions.[190]

115. The federal government also requires reporting of a type of acquisition price for Medicare Part B under the current regime of ASP+6% put in place by the MMA.[191]

116. The New York State government is another example of a large payor requiring physicians to submit actual acquisition costs of PADs for reimbursement, which it does under the New York State Medicaid program.[192]

3. Payors could (and did) conduct surveys and studies

117. The government has conducted numerous studies of single-source and multi-source drugs, both SADs and PADs, under Medicare Part B, Medicaid, and other programs.[193] Dr. Hartman has acknowledged that payors undertook a variety of studies of spreads during the class period,[194] which allowed them to gain additional information about spreads.

118. Buyers will often seek out information on prices to help them find a lower price. However, buyers will only search for information if it is worthwhile for them to do so. The expected gains are the savings to be had from finding a lower price than the

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[189] CBO, *How the Medicaid Rebate on Prescription Drugs Affects Pricing in the Pharmaceutical Industry*, January 1996 ("1996 CBO Report"), Chapter II, pp. 5, 11.

[190] See OIG, *Comparing Drug Reimbursement: Medicare and Department of Veterans Affairs*, OIE-03-97-00293, November 1998, pp. i–ii; 2001 OIG Report, pp. i–ii.

[191] 69 Fed. Reg. 47520–47521 (August 5, 2004).

[192] The New York state Medicaid drug program has required that physician-administered chemotherapy drugs are billed separately by the physician from services in administering the drug and are paid for at "the actual cost of the drugs to the practitioners." N.Y. Soc. Serv. Law § 367-a(9)(a); See New York State Department of Social Services, *MMIS Provider Manual* at 7-107; 7-157 (revised July 2003).

[193] See section III.A.1.

[194] Hartman Declaration of Dec. 16, 2004, ¶ 15(f)(i), fn. 13.

one in hand already, while the costs are time, effort, and other resources spent in finding additional price quotes.[195]

4. Payors were not unsophisticated, as portrayed by Plaintiffs' experts

119. In her liability report, Dr. Rosenthal simply assumes that large and sophisticated payors were injured by the alleged AWP inflation,[196] rather than analyzing the economics of the larger medical market in which the parties operate and the complex bundle of goods and services they are continually contracting over. She dismisses the possibility that payors compete for physicians or that their contracts could account for the "spread" in a sophisticated way. Her arguments for this position are first, a 1963 citation from Kenneth Arrow that "medical care markets suffer from market failure and institutional features dampen price competition."[197] However, since 1963 there has been a marked improvement in information technology and management techniques in the healthcare industry, and such a simplistic view of how payors might handle changing "spreads" is simply out of date.[198] The Federal Trade Commission has studied competition in the PBM industry and found that some health plans are "large, sophisticated, repeat-purchasers of health care services."[199]

120. Secondly, Dr. Rosenthal alleges that the market power of physicians prevents payors from protecting themselves against increased "spreads."[200] Dr. Rosenthal claims that payors, including the Federal Government, are weak bargainers relative

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[195] See, for example, Burdett, Kenneth and Kenneth L. Judd, "Equilibrium Price Dispersion," *Econometrica*, Vol. 51, No. 4, July 1983, pp. 955–969 at 955–957.

[196] Rosenthal Liability Report, ¶ 9: "Because their payments to providers for the AWPIDs were a mathematical function of the AWPs, members of the three Sub-classes would have been economically injured if the Defendants inflated those AWPs as alleged. That is, if the allegations are true, members of the Sub-classes paid more for these drugs than they would have in the absence of the alleged fraud."

[197] Rosenthal Liability Report, fn. 25.

[198] For example, specialty pharmacies such as AdvancePCS have "sophisticated systems" developed through PBM operations to efficiently administer medical and pharmacy benefits. See "AdvancePCS Views Its Specialty Rx as Complementary to Caremark's Approach," *Specialty Pharmacy News*, Vol. 1, No. 2, March 2004, pp. 1–3.

[199] FTC Letter to California Assemblyman, 2004, p. 9.

[200] Rosenthal Liability Report, ¶ 25–28; Rosenthal Deposition, pp. 250–252.

to specialist physicians and this allowed the alleged fraud to happen.[201] Her explanation for the weak position of the government and private payors consists of a theoretical description of the deep and fundamental reasons for physicians' market power—their relationships to patients and barriers to entry—that have not changed over time. In particular, these potential sources of market power did not suddenly appear at the time of the alleged fraud. To the extent that physicians have always had market power, as Dr. Rosenthal suggests, then that market power could not be the reason for the alleged AWP fraud occurring in the 1991–2004 period since the underlying causes of market power have not changed. Physicians have always demanded and will continue to demand what Dr. Rosenthal characterizes as high compensation[202]—whether in the form of office visit fees or drug spreads—and market dynamics will continue to influence the level of compensation physicians receive.

5. The "importance of being unimportant" did not prevent payors' due diligence

121. In the case of physician-administered drugs, Plaintiffs' expert Dr. Hartman assumes that payors only recently began focusing cost control efforts on physician-administered drugs.[203] Dr. Hartman's approach ignores numerous actions by payors that were clearly motivated by institutional knowledge, including implementation of Least Cost Alternative programs,[204] Maximum Allowable Cost (MAC) programs, Medicare policy changes in the wake of the *Barron's* "Hooked on Drugs" article,[205]

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[201] Rosenthal Liability Report, ¶ 26.

[202] Dr. Rosenthal has not performed any economic analysis of profitability to support her conclusion that "competition has far from driven out excess profits associated with inflated AWPs." See Rosenthal Liability Report, ¶ 28.

[203] Hartman Declaration of Sept. 3, 2004, Attachment D: ¶ 28; Hartman Declaration of Dec. 16, 2004, ¶ 17 (l); Hartman Liability Report, ¶ 28 (g), fn. 31.

[204] See Hartman Liability Report, Attachment F: p. 16 (Zoladex: "Most carriers implement LCA policy by 1/1/99").

[205] Hooked on Drugs, 1996, p. 15: "But Medicare, one of the largest insurers that still reimburses at AWP, is about to demand a change. The huge federal health-insurance program, trying to forestall insolvency, soon will propose regulations aimed at cutting the amount it lays out for the nearly $2 billion in annual drug claims it covers outside of hospitals."

constant efforts to reform reimbursement alluded to by the Department of Health and Human Services (HHS) throughout the 1990s,[206] and various changes in Medicare Part B statutory reimbursement rates to reduce program expenditures. These constant reforms demonstrate that PAD reimbursement was not "unimportant" to payors.

122. Dr. Hartman apparently interprets his assumption to mean that cost controls were not worthwhile for payors *because* the amounts spent on PADs were a relatively small part of total expenditures by payors.[207] For this to be true, the search costs would have to be higher than the expected gains for all the insurance companies and Medicare for all the PADs in the case.

123. Dr. Hartman's assumption about payors' cost control efforts is flawed for a variety of reasons. First, payors' expenditures on PADs are concentrated in a small number of drugs, which would substantially reduce the search costs required to identify potential cost savings. For example, Professor Berndt states that only 35 of the approximately 450 drugs covered under Medicare Part B accounted for 90 percent of Medicare Part B spending on drugs.[208] The President of CIGNA Pharmacy acknowledged that specialty drug spending is "very concentrated", "[t]hese products are used by about 0.2% of the patient population", "[l]ess than 5% of providers are prescribing these therapies", and "[a] relatively small number of providers need to be involved in plan management strategies."[209]

124. Second, if there is a fixed dollar cost of monitoring or searching for prices (e.g., the salary of a claims analyst), a payor would have an increasing incentive to collect

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[206] "As you know, we have been actively working to address drug payment issues, both legislatively and through administrative actions, for many years. We tried several approaches in the early 1990s, but they were not ultimately adopted. In 1997, the Administration proposed to pay physicians and suppliers their acquisition costs for drugs, but Congress did not adopt the Administration's proposal." See DeParle Letter to Carriers, 2000, at AWP041-0945.

[207] Hartman Declaration of Dec. 16, 2004, ¶17 (l); Hartman Liability Report, ¶ 60 (b).

[208] Berndt Report, ¶¶ 87–88.

[209] Bryant, Jim, *Taking Charge of Specialty Drug Costs*, keynote speaker at the Managed Healthcare Industry Forum on Pharmacy Benefits, June 3, 2004, p. 8.

information as its purchases increase in absolute size, even if those purchases remain a small *share* of its spending.

125. Third, if the potential cost savings are large in relation to purchases, it may be worthwhile for the payor to pursue cost reduction measures even though total spending on the targeted purchases is relatively small. For example, suppose that an insurance company could seek out information on market prices for an uncommon physician-administered drug, but the expected savings per prescription of that drug were large. The payor may still find it to be cost-effective to seek savings in a small market segment depending upon the magnitudes of cost savings, information costs, and total purchases. If the cost savings were important to payors, they would have expended efforts to obtain them.[210]

126. Fourth, even if a payor or a government agency had limited incentives to seek cost savings, it could hire a third party that specializes in managing the costs of a particular segment on behalf of many buyers. For example, third-party payors have done this for self-administered drugs with pharmacy benefits managers,[211] and for physician-administered drugs with specialty pharmacy providers,[212] group purchasing organizations ("GPOs"),[213] and what are known as oncology "carve outs."[214] Thus, even if the firm was not of sufficient scale to justify gathering

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[210] For a general discussion of the topic, see Stigler, George, "The Economics of Information," *Journal of Political Economy*, Vol. 69, No. 3, June 1961, pp. 213–225 at 216.

[211] Scherer, F.M., "How US Antitrust Can Go Astray: The Brand Name Prescription Drug Litigation," *International Journal of the Economics of Business*, Vol. 4, No. 3, 1997, pp. 239–256 at 241.

[212] Berndt Report, ¶ 103. Specialty pharmacy providers handle the management and distribution of generally high cost pharmaceuticals that require special storage and handling, primarily injectables; see, for example, Marlo, Karen, "How Well are Specialty Injectable Drugs Managed?," *Biotechnology Healthcare*, March 2004, pp. 38–43 at 41. By 2002, most large PBMs and Aetna offered specialty pharmacy services, and the others were in the process of developing them; see Atlantic Information Services, Inc., "Defining Specialty Pharmacy: Service, Market, and Players," *Drug Cost Management Report*, 2002, pp. 1–5 (AIS, 2002), at 1–4.

[213] GAO, *Testimony: Medicare Outpatient Drugs: Program Payments Should Better Reflect Market Prices*, GAO-02-531T, March 14, 2002, p. 6. Muse and Associates, "The Role of Group Purchasing Organizations in the U.S. Health Care System," *HIGPA*, March 2000, p. 9.

[214] Payors traditionally defined a "carve out" as "any portion of the benefit plan that is not part of the global service agreement." More recently, "carve outs" may include programs that are essentially unlicensed specialty health plans offering a full range of managed care services. See Kurowski,

information itself, it could join with other purchasers to achieve economies of scale in information acquisition.

127. Fifth, substantial *changes* in a small category of drug expenditures could bring the category to the attention of managers. Professor Berndt noted that Medicare Part B spending on drugs was estimated to increase to 3 percent of total Medicare expenditures in 2002, and "[w]hile in levels and share still relatively small, the Medicare Part B growth in drug expenditures has been very substantial, and has therefore attracted considerable attention."[215]

128. Furthermore, the "importance of being unimportant" argument is belied by the large dollar amounts that class members allegedly overpaid for drugs. If such large dollar amounts could have been saved, these drugs would have been "important" for payors.[216]

129. Any payor who chose to search for information on drug acquisition costs could have become informed. If they chose not to become informed about physicians' acquisition costs, it is far more plausible to infer that they did not believe knowledge of acquisition costs would affect their reimbursement decisions than that the amount spent on physician-administered drugs was too small to be important.

C. The use of AWP would not prevent payors from limiting the size of "spreads"

130. If a payor wants to reduce the physicians' spread on PADs, it has several options. First, insurance companies and Medicare could reimburse at rates amounting to a

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Bettina, "Cancer Carve Outs, Specialty Networks, and Disease Management: A Review of Their Evolution, Effectiveness, and Prognosis," *American Journal of Managed Care*, Vol. 4, June 25, 1998, pp. SP71–SP89 at SP72.

[215] Berndt Report, ¶ 86.

[216] "Under the header 'Drug Prices: What's Up?,' WASH. POST explains that while prescription drug costs only amount to 7% of U.S. health care expenditures, they are being scrutinized and criticized widely by consumers, insurers and lawmakers for a variety of reasons: 'they're still a big-ticket item;' 'they're growing fast;' 'they're paid for out of pocket;' 'they affect older people disproportionately;' and 'American consumers pay the highest drug prices in the world.'" "Drug Prices: Hot Topic for Lawmakers/Producers/Consumers," *American Health Line*, December 15, 1992.

lower percentage of AWP. This reimbursement rate could be applied to all PADs or only to selected drugs that the payor had identified as problematic.

131. Second, large payors could develop MAC lists for branded and generic physician-administered drugs within a therapeutic category if "spreads" became unacceptably large. To the extent that payors have not implemented MAC lists for PADs, that could very well be because they might interfere with their other legitimate business objectives (e.g., maintaining provider participation). Note that Medicare Part B's J-code reimbursement rate-setting methodology for multi-source drugs is similar to a MAC list in that it specifies a single reimbursement rate for all manufacturers' forms of a drug. It is certainly possible for payors to implement MAC lists for PADs, as demonstrated by the experience of several state Medicaid programs that have already implemented MAC lists for physician-administered drugs.[217]

132. Third, during the class period, Medicare could have shift away from using information provided by price reporting services—and toward sources like market surveys or actual transactions prices—to determine reimbursement.[218]

133. Fourth, insurers could implement something as simple as the LCA (Least Cost Alternative) described by Dr. Rosenthal in her report.[219] She notes that when insurance companies adopted this reimbursement rule, the AWP of Zoladex ceased to increase.

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[217] The states with Medicaid PAD MAC lists include at least Florida, Montana, and Wisconsin. "In 2000, Florida added 400 NDCs for injectable drug products identified through whistle-blower litigation and many other products not identified in CMS's FUL listing to its state MAC pricing list"; see *The Florida Senate – Interim Project Report 2005-141*, November 2004, p. 5. In Montana, "Reimbursement to physicians for physician-administered drugs which are billed under HCPCS 'J' and 'Q' codes is either according to a fee schedule based upon the Montana estimated acquisition cost or maximum allowable cost, as defined in ARM 37.86.1101 or the provider's usual and customary charge, whichever is lower"; see *Administrative Rules of Montana*, Updated through September 30, 2005, Section 37.86.105 (4), accessible at http://arm.sos.mt.us/37/37-19835.htm. In Wisconsin, "DHFS would apply: (a) maximum allowable cost (MAC) pricing to physician-administered drugs in cases where generic drugs are readily available"; see State of Wisconsin, DHFS, *Fiscal Bureau Budget Analysis, Medical Assistance, BadgerCare, and SeniorCare Eligibility, Payments, and Services*, p. 244, accessible at http://www.pswi.org/government/Fiscal%20Bureau%20Budget%20Analysis.pdf.

[218] 2003 MedPAC Report, Chapter 9, p. 152.

[219] Rosenthal Liability Report, ¶ 37.

134. Fifth, payors could choose to reimburse drugs as a pharmacy benefit. Professor Berndt suggests that when physician-administered drugs are handled by payors as a medical benefit and these expenditures are poorly monitored (because of the difficulty in tracking drugs using J-codes), "possibilities for mischief and abuse arise."[220] Pharmacy benefit plans use intermediaries such as PBM to establish reimbursement rates and keep track of drugs by NDCs, and this allows more sophisticated tracking of drug expenditures. It is the payor's choice whether to reimburse a drug under the medical or pharmacy benefit package. Payors could also introduce the characteristics of a pharmacy benefit to their medical benefit packages.[221] Some payors, such as CIGNA, contend that expenditures on physician-administered drugs can be successfully controlled regardless of whether they are handled as a medical or pharmacy benefit.[222]

135. Sixth, payors could move away from AWP to an ASP system, such as Medicare Part B did, for PAD reimbursements.

D. Payors may use spreads as a purposeful strategy

136. Given the readily available information on "spreads" between benchmark prices and acquisition costs for providers, the incentives most buyers had to gather this information about most drugs, and payors' ability to counteract spreads with a variety of techniques, why did so-called "mega-spreads" persist? While Dr. Hartman portrays the situation as involving a failure by payors to act due to fraud, the evidence suggests that spreads were a purposeful strategy by payors to further their business (and in the case of Medicare, policy) objectives.

1. Payors may use spreads to encourage a shift in care out of hospitals

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[220] Berndt Report, ¶ 191.

[221] Unlike private payors, for the Medicare program an act of Congress would be required. However, Medicare already has a MAC-like reimbursement mechanism for PADs, as I discuss below.

[222] CIGNA Pharmacy Benefits Evolution, *Optimal Specialty Drug Benefit Solutions from CIGNA, Pharmacy Producer Newsletter*, March 2005, pp. 1–16 at 9.

137. Payors have incentives to allow physicians to have a spread on drug purchases to encourage a shift in care out of hospitals into physicians' offices, which generally lowers the total cost of health care. Office-based oncology practices are more efficient—the same treatment may take three to four times longer in the hospital.[223] Whereas most chemotherapy was administered in hospital settings as recently as the late 1980s, recent data indicate that more than 80 percent of all chemotherapy treatment encounters now occur in freestanding oncology physicians' offices and community cancer centers,[224, 225] saving insurers substantial sums. The savings to payors of shifting treatment of patients undergoing chemotherapy out of the hospital is well documented[226, 227, 228] as are the savings for other types of patients undergoing drug therapy.[229]

138. Payors deliberately negotiated higher physician reimbursement rates that promoted a shift of drug therapy to settings outside of the hospital, which reduced the total cost of health care to the payor.[230] These higher reimbursements gave the physician the incentive to invest in the equipment and infrastructure necessary to administer PADs in their offices. Thus, it made good business sense for insurers to have provided physicians financial incentives to spur the transition out of the hospital. This was one of the effects of Medicare's Prospective Payment System for inpatient care, whose limitations on payments for inpatient care made it more attractive for physicians to treat many patients on an outpatient basis, including chemotherapy

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[223] Herzlinger, Regina, *Cancer Care in America: Description and Implications of Outpatient Community-Based Cancer Care*, Boston Healthcare Associates, March 2002, p. 13.

[224] *Reimbursement vs. Reality: A Discussion Paper on Medicare Payments for Cancer Treatment*, Oncology Nursing Society, 2003, p. 1, accessible at http://www.ons.org/lac/pdf/Reimbursement.pdf.

[225] Dougherty and Hagin, 1989, p. 1.

[226] McCann, Barton C. and Julia A. James, *The Impact of Medicare Payment Policies on Patient Access to Quality Cancer Care*, Health Policy Alternatives, June 1999, pp. 1–18 ("McCann and James, 1999") at 4.

[227] GAO, *Medicare Reimbursement Policies can Influence the Setting and Cost of* Chemotherapy, GAO/PEMD-92-28, July 1992, p. 4.

[228] 2005 CMS IVIG Article.

[229] Herbold Deposition (CIGNA), p. 76; Owens Deposition (Independence BC), pp. 127–129.

[230] Owens Deposition (Independence BC), pp. 130–132.

patients.[231] Knowledge by the payor that it is offering large spreads to physicians for a particular purpose would indicate legitimate economic behavior rather than fraud.

2. Payors may use spreads to cross-subsidize other services

139. Payors have incentives to allow physicians to have a spread on drug purchases to compensate for inadequate drug administration fees[232, 233, 234] and substantial practice expenses[235] that are otherwise unreimbursed. Note that the gross revenues associated with the spread are not net profit for the physician to the extent that they are used to compensate for inadequate drug administration fees and for covering

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[231] Holcombe, Dawn, *The Evolution of Community Oncology Care and its Threatened Extinction Due to Federal and Private Payment Reform*, Medical Group Management Association, Aug. 25, 2003 ("Holcombe, 2003"), p. 5: "The chemotherapy DRG – DRG 410 – ended up being the lowest weighted of all DRGs. Inpatient treatment that would have been appropriately paid under the old system was now being paid at an artificially set level intended solely to lower Medicare costs, and thus forced chemotherapy on an inpatient basis to become a loss to hospitals. Tens of thousands of cancer patients were forced to have their care shifted from the inpatient to the outpatient setting, thus also forcing these sick, debilitated and nauseous patients to endure daily travel to receive their care." See, also, Herzlinger, 2002, p. 7.

[232] Prior to [1992], many Medicare carriers allowed a separate payment for chemotherapy administration in the non-office setting in addition to the visit charge…Beginning in 1992, however, HCFA took the position that the chemotherapy administration codes were intended to cover only the technical aspects of the administration and that all physician services were considered to be included in a visit or consultation code. First, because of the unusual amount of work outside the face-to-face encounter, the usual visit codes, which do not explicitly consider such factors in determining the appropriate level of service, may understate the amount of work involved. Second, some carriers continue to apply arbitrary rules limiting use of the higher levels of service of the visit codes, thus precluding their availability as a practical matter." Bailes, Joseph S., "Payment and Coverage Issues Affecting Medical Oncology," *Breast Cancer Research and Treatment*, Vol. 25, 1993, pp. 119–126 at 121–122.

[233] "As we have gathered information on many of the drugs reviewed by DOJ, we have concluded that Medicare payments for services related to the provision of chemotherapy drugs and clotting factors used to treat hemophilia and similar disorders are inadequate." DeParle Letter to Carriers, at AWP041-0945.

[234] Letter from members of Congress to Shalala, 2000, p. 1.

[235] Holcombe, 2003, p. 6. See, also, 53 Fed. Reg. 39644 (October 11, 1988): "Changes in treatment methods and advances in technology now allow chemotherapy to be furnished to many patients in the physician's office, thus reducing the need for hospitalization to administer chemotherapy. Furnishing these services in the physician's office is more convenient for some patients and may provide other benefits as well. Current Medicare Part B payment rules for physicians' services, however, may fail to compensate adequately for these services because the usual reasonable charge methodology may not fully recognize the overhead costs involved in these procedures. Some sources of additional costs include employment of nurse oncologists, special patient rooms, and safety equipment required because of the toxicity of the chemotherapeutic agents and safety procedures issued by the Occupational Safety and Health Administration."

legitimate practice expenses. Such cross-subsidization occurs in the Medicare Part B program for oncologists[236, 237] and other office-based specialist physicians.[238] It is also well documented that private payors use spreads to cross-subsidize other insufficiently reimbursed services, such as drug administration fees and physician practice expenses.[239, 240] Clearly, if payors purposefully allow spreads in order to keep physicians in business, there is no fraud.

3. Payors may use higher spreads on some drugs to offset lower spreads on other drugs

140. As I discuss above, publicly available reports have documented that spreads vary across drugs, and health plan deponents in this matter have acknowledged that providers have positive margins on some drugs and lose money on others.[241] However, since payors focus on the total payments to providers, the variation in margins across individual elements of the fee schedule does not hinder their determination of reimbursement rates. Note that since payors allow margins to vary across drugs and providers' price concessions may vary across drugs, spreads for

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[236] "The components [of Medicare office-based chemotherapy administration] that reflect overhead and other practice expenses, however, are based not on the actual costs incurred by oncologists in providing chemotherapy, but on historically allowed charges. As a result of this approach, Medicare payments for chemotherapy administration appear to be inadequate to cover the costs involved. A pilot study of a few practices conducted by the American Society of Clinical Oncology indicated that many oncologists may be losing money in providing office-based chemotherapy." Bailes, Joseph S., "Reimbursement: Current Status and Future Outlook," *Seminars in Oncology*, Vol. 21, No. 4, Suppl. 7, August 1994, pp. 118–122 at 118.

[237] 2003 MedPAC Report, p. 159.

[238] Medicare reimbursement "for injectable drugs involves what has long been understood by the CMS, providers, and the drug industry as an arbitrary but necessary cross-subsidy: Physicians in certain specialties (predominantly oncology, rheumatology, endocrinology, and nephrology) are reimbursed for their evaluation and management of patients at rates that do not cover their incomes and practice expenses; these shortfalls are recovered by the margin between what these providers are reimbursed for the injectable drugs they administer to patients and what they actually pay to purchase those drugs." Kleinke, J.D., "Re-Naming And Re-Gaming: Medicare's Doomed Attempt To Reform Reimbursement For Injectable Drugs," *Health Affairs*, December 8, 2004, W4-561–W4-571 at W4-562.

[239] See, for example, Spahn Deposition (Anthem BCBS), pp. 109–110, and 2000 Ashcroft Statement to the Senate, at S8022.

[240] MedPAC, *Physician-Administered Drugs: Distribution and Payment Issues in the Private Sector*, A Study conducted by NORC, August 2003, No. 03-4, p. 3.

[241] See section III.C.

some drugs may be quite large on a percentage basis (even if they are small in dollar terms).

4. Payors may use spreads to ensure provider participation in networks, which would require substantial reimbursements if some providers have market power

141. Payors compete for physicians to include in their provider networks,[242] and there was a significant amount of such competition in the 1990s.[243] To be competitive, cancer care centers must be adequately funded to allow them to attract physicians, provide efficient support staff, and use the latest technology.[244] Thus, payors have strong incentives to allow physicians to have a spread on drug purchases to encourage their participation.[245, 246, 247, 248] Payors have even substantially increased overall reimbursement rates (and therefore spreads) to maintain robust provider networks.[249]

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[242] See, for example, Deposition of Richard A. Francis (Reimbursement consultant, Harvard Pilgrim Health Care), September 20, 2004 ("Francis Deposition"), pp. 5–6, 22; Owens Deposition (Independence BC), pp. 49–50.

[243] Owens Deposition (Independence BC), pp. 49–50.

[244] Dougherty and Hagin, 1989, pp. 1, 18–20 at 19–20.

[245] MedPAC, *Survey of Health Plans Concerning Physician Fees and Payment Methodology*, A study conducted by Dyckman & Associates, August 2003, No. 03-7, p. 18.

[246] Anthem BCBS was aware that it had to pay providers competitive rates in order to maintain an adequate provider network. See Spahn Deposition (Anthem BCBS), pp. 53–55, 63–64.

[247] Blue Cross Blue Shield of Massachusetts was concerned that reducing fees under ASP reimbursement might lead to physicians withdrawing from their provider network, rendering it unviable. See Mulrey Deposition (BCBSMA), pp. 129–130.

[248] According to Professor Berndt: "Specifically, with physician-administered drugs, health plans/insurers risk losing valued physicians from their specialty networks (with all the implications that has for the competitiveness and relative attractiveness of the plans they offer employers) if they move patients from medical to pharmacy benefits and contract through specialty pharmaceuticals or PBMs for purchasing these drugs, instead of letting physicians capture the benefits of purchasing the drugs themselves and implicitly reselling them to payors. As a result, payors may not be quite as aggressive in obtaining cost information about these drugs, as they would be were they dealing with pharmacy-dispensed drugs"; Berndt Report, ¶ 108. "Even if they do invest in such information gathering activities, if health plans shift to a third-party supplier of the physician-administered drugs, they thereby might risk losing scarce specialty physicians from their physician network who have profited from the 'spread'"; Berndt Report, ¶ 188.

[249] See, for example, Owens Deposition (Independence BC), pp. 193, 201–202 (standard fee schedule plus 13 to 14 percent).

142. What is the consequence for a private payor of failing to offer competitive reimbursement rates? Each physician is likely to have a particular wage below which he or she is unwilling to supply labor to the market. For a sole practitioner, for example, that wage is essentially the difference between revenues earned from payors and office expenses (nursing care, rent, needles, drugs, etc), plus a reasonable return on the investment. If the physician's wage falls, he or she may pull out of the insurance plan's network or even stop providing office-based services altogether.[250]

143. If physicians find Medicare Part B fees to be unacceptable, they can refuse to treat Medicare patients, which is comparable to dropping out of a private payor's network. Another alternative for office-based physicians is to treat those patients in a hospital.

144. The payor's incentives to provide a spread are particularly strong for specialists such as oncologists, who serve large geographic areas and may have some degree of market power according to Dr. Rosenthal[251] and Dr. Hartman.[252] In these circumstances, it would be difficult and costly (e.g., in search costs) for payors to find alternative oncologists for their networks if physicians withdraw. This scarcity is what ultimately allows the physicians to demand higher reimbursement rates. Again, in this scenario the payors realize there are large spreads on PADs and prefer to allow the physicians to earn those spreads, so clearly this would not be an instance of fraud.

145. The larger spread that the physician (such as an oncologist) earns from administering PADs to a Medicare beneficiary in the office rather than in the hospital encourages the physician to treat Medicare patients in the office, rather than in the hospital, and to provide better quality of service. If Medicare patients are profitable, the physician will likely agree to participate in the program and work

[250] Mulrey Deposition (BCBSMA), pp. 129–130; Owens Deposition (Independence BC), pp. 130–132.

[251] Rosenthal Liability Report, ¶ 26.

[252] Dr. Hartman believes that "barriers to entry allow current market participants to enjoy excess profits," in particular for specialist physicians. Hartman Declaration of Dec. 16, 2004, ¶ 68.

to attract Medicare patients with a convenient office location and opening hours, and pleasant nurses and facilities. The physician may be willing to spend more time with their Medicare patients if he or she values their business and wants them to return. Thus, Medicare patients may benefit from the spreads on PADs if those spreads attract not simply physician services, but the care and attention of convenient and high-quality physicians.

5. Payors may use spreads to promote use of generic drugs

146. As Professor Berndt has stated, for self-administered drugs, payors have allowed providers to have margins on drugs in order to encourage the use of generic drugs: "one widely understood reason third-party payors have long been willing to allow pharmacies to enjoy considerable 'spread' on their generic drugs is that whenever a generic version of a drug is dispensed instead of its brand version, the third-party payor saves a substantial amount of money."[253] This logic has been confirmed by the testimony of payors in this matter.[254] The same logic applies to physician-administered drugs. Plaintiffs have described the size of generic spreads in an alarmist fashion,[255] without noting that in order to create the incentive just described, the absolute dollar size of the spread must be sufficient. For example, Plaintiffs list the spread on albuterol Sulfate as 953.6%,[256] but fail to note that this represents a dollar value to the physician of $27.38. A "non-fraudulent" spread of 29% on this drug would be worth $0.83, which would be unlikely to create a sufficient incentive for the physician to use the generic.

6. Private payors relied on negotiations, not expectations of spread, to set competitive reimbursement rates

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[253] Berndt Report, ¶ 52. Dr. Hartman notes: "Overall, 82% of HMO enrollees are in plans requiring generic substitution, as of 1999." See Hartman Declaration of Sept. 3, 2004, Attachment C: ¶ 31.

[254] See, for example, Owens Deposition (Independence BC), pp. 182–183.

[255] See, for example, Hartman Liability Report, ¶ 28 (f).

[256] Hartman Liability Report, for NDC 59930150008: Attachment G.5.a (2002 ASP of $2.87), Attachment G.5.b (2002 AWP of $30.25), Attachment G.5.c (2002 Spread of 953.6%).

147. The evidence in this case suggests that payors do not need information about any physician's costs in order to determine "fair" reimbursement rates to physicians. Payors can simply offer fee schedules to physicians and observe whether they accept them and how hard they argue for higher payments. Then the payor can negotiate whatever increased rates are necessary to maintain a robust provider network.[257] This point holds for the Federal Government also, which is lobbied by physicians when fees become too low,[258] and from patients who are unable to receive the physician services they desire when physicians exit from an unprofitable market.

148. In this scenario, neither knowledge nor lack of knowledge of the drug's spread would have a financial impact on the payor. Because the payor would adjust the entire fee schedule when bargaining with physicians, information about individual drug spreads would not have an impact on the negotiation. Since knowledge of spreads is immaterial to the financial situation of the payor, there could not be harm from the alleged AWP fraud.

149. The frequent recontracting of private payors trying to keep costs down drives physicians to the lowest net reimbursement they would accept at any given time, regardless of whether that reimbursement shows up as a drug or service line item. Government payors are also continually searching for ways to lower costs. Because payors such as CIGNA and Medicare are huge[259] relative to even a well-compensated oncologist,[260] they have considerable bargaining power during contracting. Thus, even though the spreads on PADs (and other costs of the

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[257] Spahn Deposition (Anthem BCBS), pp. 61–62; Beaderstadt Deposition (John Deere Health Plan), pp. 76–77.

[258] Rosenthal Liability Report, ¶ 26.

[259] CIGNA's health care operations collected revenues of $12.178 billion in FY2004, $8.479 billion of which came from medical benefit premiums; see CIGNA 2004 10-K. Medicare's 2004 budget was approximately $250 billion; see OMB, *Bush FY 2004 Medicare Budget*, accessible at http://www.policyalmanac.org/health/archive/medicare_budget_FY04.shtml.

[260] According to Dr. Rosenthal, the top quartile of oncologists made $479,000 in 2001. See Rosenthal Liability Report, ¶ 28.

physician) may vary, the contracting process would squeeze out any profit not required to maintain the physician in the network.

V. There are Legitimate Economic Reasons Not to Have a Predictable Relationship between Benchmark Price and Transaction Price

A. The patent system causes price variation

150. As a result of the patent laws, many drugs face no competition during the protected sales period and, as a result, prices may be higher. There are sound economic reasons to allow patent protection. In the case of drugs and some other products (e.g., computer chips, books), it takes substantial resources to invent and test a new, innovative product. Once invented, however, the cost associated with manufacturing an additional unit of most drugs is quite low.[261] If the manufacturer set a price equal to the cost of manufacturing the incremental pill, it would never make enough money to pay for any research and development (R&D)—including that associated with products that are investigated but not ultimately manufactured—and may cease developing new products altogether.[262, 263]

151. However, the government limits the amount of time a manufacturer can protect its innovation with a patent. After the patent expires, other companies are free to enter

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[261] The marginal cost of production for some molecules is higher, for example, vaccines and biotech products. See Berndt, Ernst R., "Pharmaceuticals in U.S. Health Care: Determinants of Quantity and Price," *Journal of Economic Perspectives*, Vol. 16, No. 4, Fall 2002, pp. 45–66 ("Berndt, 2002") at 56.

[262] Scherer, F.M., "The Link Between Gross Profitability and Pharmaceutical R&D Spending," *Health Affairs*, Vol. 20, No. 5, September/October 2001, pp. 216–220 ("Scherer, 2001") at 216, 220; and Danzon, Patricia and Adrian Towse, "Differential Pricing for Pharmaceuticals: Reconciling Access, R&D and Patents," *International Journal of Health Care Finance and Economics*, Vol. 3, 2003, pp. 183–205 at 185.

[263] An example was the Vaccines for Children Program in 1993, where the government expected to ultimately account for approximately 80 percent of the U.S. vaccine market purchases at prices significantly below those of the private sector. If the program were implemented as originally planned, "it would have had very significant negative impacts on the returns to and the cash flows available for new vaccines. As a consequence, vaccine suppliers would be expected to shift R&D investments to adult vaccines and other biopharmaceutical R&D projects." See Grabowski, Henry and Vernon, John, "The Determinants of Pharmaceutical Research and Development Expenditures," *Journal of Evolutionary Economics*, Vol. 10, 2000, pp. 201–215 at 213.

the market and use the patented idea. This entry will cause transaction prices to decline.

B. Competitive conditions are constantly changing with the entry of therapeutic substitutes and the advance of science

152. There have been frequent changes in the competitive landscape of the pharmaceutical industry caused by the advance of science, such as new compounds advancing through the stages of clinical trials, new indications for existing drugs, and entry of therapeutic substitutes. These changes in competitive conditions often cause changes in price concessions (and potential changes in spreads), and such price variation is economically beneficial.[264] In addition, competitive conditions often vary substantially across drugs in different therapeutic classes.

C. Variation in price concessions promotes competition

153. Price competition among manufacturers of substitute products is so normal and welfare-enhancing that it is one of the central themes of economics both in the classroom and in public policy.

154. The freedom that manufacturers have to offer varying price concessions across customers allows them to attempt to win a new customer with a price discount. This type of competition simply could not happen if every customer had to receive the same range of discounts off of AWP. In that case, there would be one price for all customers. Lowering that price in order to capture the business of one physician group or HMO would be prohibitively costly if all other customers also received the new lower price. In contrast, when a manufacturer can tailor discounts to its customers, it is more likely to offer such discounts. This encourages vigorous price competition.[265]

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[264] See section III.E.

[265] 1998 CBO Report, pp. 23–24.

D. Confidential price concessions are economically rational and nonfraudulent

155. As I discuss above, it is common in many industries for negotiated price concessions to remain confidential, especially when discounts are individually negotiated with buyers.[266] There is nothing fraudulent or deceptive about this standard practice. Both the buyer who receives a price concession and the seller who provides it would prefer their price concessions to remain confidential because it reduces the likelihood that other buyers would seek similar price concessions, potentially resulting in lost sales.

VI. There are Legitimate Economic Reasons for a Seller to Keep Constant or Raise the Benchmark Price When the ASP Declines

156. Dr. Hartman considers any AWP increase that results in a "spread" greater than his liability threshold to be fraudulent, irrespective of the motivation for the increase.[267] He does not consider, much less demonstrate, an intent to deceive or actual deception. Dr. Rosenthal's liability logic is likewise flawed. She describes the hypothetical economic incentives manufacturers had to "artificially" inflate AWPs, but fails to demonstrate empirically that this happened in any comprehensive or consistent way.[268] She provides no model of how AWPs are chosen or how they might trend over time in a competitive market absent fraud, no economic standard for "artificial" inflation, and simply assumes that the AWPs in the case are fraudulently high.[269]

157. For purposes of this discussion, I will refer to WAC as a list price and AWP as a benchmark price. It is my understanding that some manufacturers report WACs to

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[266] See section III.D.3.

[267] Hartman Deposition, p. 1227.

[268] Dr. Rosenthal did not attempt to systematically evaluate the reasons for increases in WAC or AWP (provided in deposition testimony) to patterns of price changes. See Rosenthal Deposition, pp. 258–260.

[269] Rosenthal Deposition, pp. 61–64.

third-party price publications, who then apply a mark-up to arrive at an AWP. In other cases, manufacturers report suggested AWPs.

158. A list price generally reflects the price that the seller would like to receive for its product. In industries such as pharmaceuticals, price reflects the marginal value to patients and physicians, not the marginal production cost.[270] It is not uncommon for manufacturers to report list prices for their products, or for list prices to be used as a starting point in price negotiations in many industries other than pharmaceuticals.[271, 272, 273, 274] The popularity of the practice across industries suggests there are efficiencies to be gained from it.

159. A benchmark price generally reflects a reference point for use in many situations. With thousands of pharmaceutical products sold each day in the United States, negotiations between a particular buyer and seller could involve a vast menu of products. The use of a benchmark price (such as AWP) in private negotiations drastically reduces transaction costs and allows firms to agree more easily upon contract prices involving many goods with different customers.[275]

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[270] Berndt, 2002, p. 58.

[271] Scott, Robert & Sattler, Edward, "The Theory of List Price," *Journal of Economics*, Vol. 21, No. 1, Spring 1995, pp. 81–85 ("Scott & Sattler, 1995") at 81–82. Scott & Sattler discuss industrial sales, durable goods where negotiation costs are relatively small in relation to price—such as automobiles and college tuition.

[272] The price for a coach class airline seat on a particular flight may vary depending upon how far in advance the ticket is purchased, whether it is non-refundable, and whether it is purchased alone or in combination with other products (e.g., one-way ticket versus round trip tickets). Empirical analyses have found substantial price dispersion in the prices that an airline charges different customers in the same market, with ticket prices varying by as much as 45 percent. See Borenstein, Severin, and Rose, Nancy L., "Competition and Price Dispersion in the U.S. Airline Industry," *Journal of Political Economy*, Vol. 102, No. 4, 1994, pp. 653–683 at 656, 676.

[273] Clay et al. discuss discounts off list pricing for books in relation to unadvertised and infrequently purchased items; see abstract of Clay, Karen, Ramayya Krishnan, and Eric Wolff, "Prices and Price Dispersion on the Web: Evidence from the Online Book Industry," *NBER Working Paper Series,* No. 8271, May 2001.

[274] Horowitz discusses how most housing sales are at prices below list price. Horowitz, Joel L., "The Role of the List Price in Housing Markets: Theory and an Econometric Model," *Journal of Applied Econometrics*, Vol. 7, No. 2, 1992, pp. 115–129 at "Summary".

[275] For example, buyers who are willing to buy at the benchmark price do so without any costs of negotiating, while other buyers may attempt to bargain for a lower price. See Scott & Sattler, 1995, pp. 81–82.

A. Some buyers may be willing to pay list price

160. Some buyers may be willing to pay list price or something close to it,[276] for example, if they do not want to incur the costs of searching and negotiating for better prices or they feel the product is worth its list price. Under these circumstances, it is economically rational for manufacturers not to lower list prices even if average sale prices are declining.

B. Maintaining a list price comparable to competitors' list prices may be useful in future contingencies

161. List prices sometimes increase over time due to inflation and increases in the costs of doing business. Dr. Hartman considers such normal inflationary increases to be legitimate.[277] Increases in the cost of R&D also contribute to increasing prices of competitor therapies. A manufacturer may increase the list price of its drug to remain comparable with the list prices of competitor therapies.[278]

162. Entry of a therapeutic substitute or a generic substitute does not usually cause a significant drop in the brand's list price.[279] There are some buyers who are brand loyal or who do not find the substitute to be a good one—for example, because of a particular side effect. The transaction price that such customers have negotiated (which may be the list price or a fraction of it) continues to be satisfactory for them and therefore the manufacturer would not want to lower the list price, which would cause a reduction in sales revenues from those customers. However, other

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[276] Dr. Hartman admits that WAC is "another list price or sticker price" "that is used with wholesalers" and "ASP would be below WAC generally" (Hartman Deposition, pp. 677–678).

[277] Hartman Deposition, p. 1148.

[278] "A breakthrough drug has an advantage over its me-too competitors in that doctors become experienced with it first and are usually hesitant to try a new drug unless it is seen to be more effective or have fewer side effects. New me-too drugs that offer small advantages over competitors may be sold at a lower price initially; then, as they become more widely accepted, their price rises more quickly.[25] That may partially explain why the list prices of C-rated drugs (least innovative) tend to increase much more rapidly over time than the list prices of their more innovative competitors....[Footnote 25:] Economists have analyzed this phenomenon using an 'experience goods' or 'switching costs' model"; see Scherer, F.M. and David Ross, *Industrial Market Structure and Economic Performance* (Boston: Houghton Mifflin, 1990), pp. 588–589. See 1998 CBO Report, Chapter 3, p. 21.

[279] 1998 CBO Report, Chapter 3, pp. 20–21.

customers who are not brand loyal would purchase the competitor's drug unless the manufacturer grants them a larger discount off the list price. This one list price supports varying transaction prices.

163. The first generic manufacturer into a market typically sets a WAC or AWP that is lower than the brand's WAC or AWP,[280] for example, 85 percent of it. This level of discount gives customers a financial incentive to switch to the generic, while also reflecting the lack of generic competition facing the first entrant. When additional generics enter, typically discounts on generics begin to increase. However, for comparability, the new entrants may initially set a WAC or AWP to match the first entrant. Discounts on generics rise as generic competition becomes fierce,[281] but WACs and AWPs are seldom altered.

164. Suppose a competitor drug (therapeutic or generic substitute) experiences bad news such as adverse drug reactions or the closure of a factory due to manufacturing or regulatory problems.[282] In such a case, sales of that drug would migrate to its therapeutic or generic substitute(s). A manufacturer of one of those substitutes no longer needs to compete with price discounts in order to win business. Such a manufacturer might want to charge close to or even raise its list price and would benefit from having a list price already in place.

C. Maintaining or increasing list price may preserve a premium product image

165. Often customers infer the quality of a product from the price being charged for it.[283] In the absence of complete information about the effectiveness and side effects of a drug, physician customers may believe that branded manufacturers have chosen a price that reflects the true underlying quality of the therapy relative to its

[280] Berndt, 2002, p. 63.

[281] *Ibid*, p. 63.

[282] See, for example, Millenson, Michael L., "Lyphomed to Take Plant Out of Action," *Chicago Tribune*, June 17, 1988, Business section, p. 4, Zone C; Berner, Robert, "Drug Firm Problems Revealed," *Patriot Ledger* (Canton, MA), October 3, 1994, Sec. A, p. 1 (discussing Copley Pharmaceuticals).

[283] Milgrom, Paul and John Roberts, "Price and Advertising Signals of Product Quality," *Journal of Political Economy*, Vol. 94, No. 4, 1986, pp. 796–821 at 819–820.

competitors. In the face of such beliefs, it would not be rational for a manufacturer to unilaterally lower the list price of their drug.

D. Maintaining or increasing list price may allow payors to create margins for providers without affecting transaction prices

166. As noted above, there are several reasons why payors may want to create margins for providers, including attracting providers to their networks, improving provider services, and compensating for under-reimbursement for services and practice expenses. Where those margins are caused by discounts in transaction prices, payors should be happy that they are not paying the margin, but rather, it is being forfeited by the manufacturer. Where those margins are created by increases in AWP, however, it does not follow that payors are deceived. Payors can easily track AWPs to determine the extent to which they increased.

167. Given that the reimbursement system was created largely by payors, no single manufacturer can change it on its own. As Professor Berndt points out,[284] if a manufacturer were to reduce its list price to eliminate the providers' margins, it would have difficulty finding customers for its drugs. Under these circumstances, if a manufacturer did not reduce its list prices, it may simply be responding to the competitive forces that have been caused by the reimbursement system as opposed to acting with fraudulent intent.

E. It is impractical to frequently change list prices, unlike transactions prices

168. It is quite common in other industries for manufacturers to engage in competitive discounting while leaving list prices unchanged. Books, for example, commonly have a list price printed on the cover. When the publisher or retailer wishes to sell more of a particular title, or compete with a neighboring retailer, they offer a discount off of the list price. Amazon.com, for example, has a policy of offering

[284] Berndt Report, ¶¶ 29–31.

flat discounts for books on the New York Times bestseller list.[285] The list price of the book is not changed, rather it is prominently displayed on the web page along with the discount.

169. A dentist typically has a list price for the services he or she provides. Large buyers, such as insurance companies, routinely negotiate discounts off the list price on behalf of their customers. For example, a patient's bill would show charges of $100 and the insurance company's "allowed amount" of $80. The dentist may have very few patients who actually pay the $100 charge, yet he does not lower his list price to $80.

170. In situations where the final transaction price is influenced by a single list price, it is sometimes easier to update the list price than every individualized transactions price. For example, manufacturers might wish to alter transaction prices for many products in the same way because of common changes in costs (e.g., increased labor costs, inflation, tax changes). Such across-the-board increases can be effectuated through changes in the list price and would have lower transaction costs for both parties than if they renegotiated the discount off list price for each transaction. This makes list prices more administratively efficient to maintain.

F. Dr. Hartman's and Dr. Rosenthal's examples had modest benchmark price increases

171. Dr. Hartman acknowledged that manufacturers' changes in list prices to reflect normal inflationary factors and customers' willingness to pay are legitimate.[286] However, manufacturers generally increased list prices in line with the consumer price index over the class period, as I illustrate in Exhibit 3. The graphs in this exhibit overlay the graphs of Drs. Rosenthal and Hartman of one NDC for each of the drugs Zoladex, Zofran, Remicade, Intron A, and Blenoxane with a new line

[285] As of 1999, Amazon.com offered 50 percent off New York Times Best Sellers; see "Amazon.com and the New York Times Settle Legal Dispute Over Use of Times Best Sellers List," *Business Wire*, August 9, 1999. Currently, Amazon.com lists several different levels of discounts for New York Times Best Sellers, from 0 percent to 40 percent. See www.amazon.com/exec/obidos/tg/feature/-/239341/103-332/785-4376615.

[286] Hartman Deposition, pp. 1148–1153.

reflecting the initial AWP increased simply by the rate of inflation each year (CPI). For Taxol, Dr. Hartman graphed a weighted average "spread" across several NDCs; I separately graph his AWP and ASP for each NDC. Without even delving into the market conditions facing each drug at any point in time, one can immediately see that manufacturers' list price increases were generally modest and, in any case, completely observable by payors.

172. Dr. Rosenthal's final argument regarding incentives of providers in the context of AWP-based reimbursements is a statement regarding the salaries of office-based oncologists.[287] While the salary number she quotes may be high relative to median family income in the United States, for example, she provides no economic analysis of whether it is higher than it would be absent the alleged fraud, which is the only relevant standard. There may be many potential reasons for relatively high oncology salaries that have nothing to do with the issues in this case: limited supply of training spots in medical schools, the expense and risk of years of schooling, etc. Such factors must be accounted for in a model of oncologists' salaries before they could be evaluated in relation to any alleged AWP scheme.

VII. Plaintiffs' But-For World is Implausible and Would Harm Consumers

173. Plaintiffs and their experts contend that payors would have reimbursed at larger discounts off AWP in the but-for. However, would not have implemented Plaintiffs' but-for world, it would not save them any money, and consumers would be worse off as a result.

A. Payors and providers would not have implemented Plaintiffs' but-for world

174. An essential element to Plaintiffs' analysis should be a thorough discussion of why payors would have implemented their view of the but-for world, if not for the alleged fraud. Plaintiffs have not offered such an analysis. In fact, there is

[287] Rosenthal Liability Report, ¶ 28.

overwhelming support to presume that payors would not have implemented Plaintiffs' but-for world.

175. First, payors would not have needed the price transparency measures advocated by Plaintiffs. Numerous payors have already acknowledged their understanding of spreads, there is plentiful information available on prices and spreads, and payors could and did take steps to acquire additional information about acquisition costs. Payors were aware of large spreads.

176. Second, payors used large spreads as a purposeful strategy to cross-subsidize low-margin drugs and other insufficiently reimbursed services, ensure provider participation, shift care out of the hospital, and encourage the use of generic drugs. Payors were not deceived by large spreads.

177. Third, if every payor paid reimbursements of less than AWP (e.g., 95 percent of AWP) on average and AWP equaled acquisition costs (as Dr. Hartman claims was the intent of the Medicare statutes[288]), then on average providers would lose money. Payors would not be able to implement such a payment system because they would not be able to find sufficient numbers of providers to participate in their programs.

B. Plaintiffs' but-for world would not save payors money

1. With the significant reductions in their fees sought by Plaintiffs, physicians would shift the site of care to hospitals, increasing total costs to payors

178. In the Plaintiffs' view of the but-for world, payments to physicians for PADs would be reduced drastically. This may lead to a reduction in the provision of office-based PADs.[289] For example, office-based oncologists would simply admit their patients to a hospital, administer the drug to the patient there, and bill for a hospital service charge (rather than the office visit charge and the drug charge). Since

[288] See section II.C.

[289] The Administration's 1998 budget proposal would have had a similar effect. See "Administration Proposes Cut of Markup on Outpatient Drugs," *Cancer Economics*, Vol. 2, No. 8, March 1997, pp. 1–3 at 1.

hospital stays are more expensive than outpatient visits,[290] the Plaintiffs' but-for world would raise—not lower—total healthcare costs to payors and consumers by a substantial amount.

2. If providers have market power, they will most likely find other ways to maintain their profits

179. The prices that payors pay to physicians—for drugs or services—are ultimately determined by the relative bargaining power of payors and physicians. If physicians have some degree of market power, as suggested by Dr. Rosenthal, they should be modeled as earning essentially the same wages in the but-for world as in the actual world. If the but-for world resulted in reduced drug reimbursement, it would be offset by increases in other forms of payments to physicians (e.g., drug administration fees) in order to maintain physician income. The offsetting effect of reducing physician-administered drug reimbursements, which would require increased service fees, has been acknowledged by health plan deponents in this matter[291] as well as a substantial number of health plans nationwide.[292]

C. Plaintiffs' but-for world would harm consumers

180. The analysis above suggests that decreases in drug prices would be offset by increases in physician reimbursement for services. However, in the odd but-for world suggested by the Plaintiffs, even such an optimistic scenario as this is unlikely to be the case either. Rather, reduced competition would increase acquisition costs for drugs, which would ultimately make customers worse off.

1. Greater transparency would reduce competition and harm consumers

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[290] McCann and James, 1999, p. 4; Herzlinger, 2002, pp. 13, 16.

[291] See section IV.D.2.

[292] See 2003 MedPAC Report, p.166. "About one-half of the plans considering changing their payment methods for drugs noted that they might have to raise physician administration fees to partially offset the reduced income generated for physicians", which refers to the findings of another MedPAC survey of approximately 32 health plans representing approximately 45 million covered lives.

181. Dr. Hartman advocates increased (and at times, full) transparency in pricing, claiming that it would reduce the disparity between manufacturers' reported benchmark prices and actual transaction prices.[293] Citing others, Dr. Hartman claims that "a lack of transparency invariably leads to less competition and higher prices."[294] However, the FTC has concluded that buyers do not need information on the sellers' cost structures to make efficient purchasing decisions in the overwhelming majority of markets.[295]

182. Dr. Hartman's but-for world of reimbursements tied to ASP eliminates incentives for price competition between drugs. In particular, if the physician could not benefit from shopping for a lower price (because a lower drug acquisition cost would simply mean a lower reimbursement rate), he would not price shop. From the manufacturer's point of view, this means there would be no threat of losing sales if transaction prices were to increase, or if they failed to decrease. With no threat of losing sales, there would be no price competition on the part of manufacturers, causing higher overall ASPs for all drugs. These effects are well understood and widely documented in both theoretical and empirical economic literature.[296] Another way to understand this point is to observe that if all transaction prices must be formulaically related to a benchmark, manufacturers would not agree to any sale that might lower the level of the "transparent" benchmark.

183. Some sophisticated payors—for example, the Kaiser Foundation Health Plan—have made it clear that they do not need or desire greater transparency.[297] In fact, requiring full disclosure of pricing information may hinder rather than foster price

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[293] Hartman Declaration of Dec. 16, 2004, ¶ 15(f).

[294] Hartman Declaration of Dec. 16, 2004, ¶ 77, citing attorney David Balto.

[295] FTC Letter to California Assemblyman, 2004, p. 8.

[296] See, for example, O'Brien, Daniel P. and Greg Shaffer, "The Welfare Effects of Forbidding Discriminatory Discounts: A Secondary Line Analysis of Robinson-Patman," *Journal of Law, Economics and Organization*, Vol. 10, No. 2, 1994, pp. 296–318 at 296.

[297] See, for example, the comments of Anthony Barrueta, Senior Counsel for the Kaiser Foundation Health Plan, quoted in Berndt Report, ¶ 152.

competition as has been noted by payors,[298] Professor Berndt and the Federal Trade Commission in other contexts[299] and MedPAC.[300]

184. What Dr. Hartman fails to see is that competition keeps prices down. If the but-for world removes any benefit from competing on prices, manufacturers would cease battling each other by lowering prices to gain sales. Naturally over time, payors would have to pay providers higher reimbursement rates to cover the increased drug prices, which in turn would cause payors to charge higher insurance premiums to employers and other purchasers. This would result in higher, rather than lower, prices paid by final consumers in the PAD market. The higher prices paid by payors and customers would leave them worse off in the but-for world.

2. History demonstrates how greater transparency affects pharmaceutical prices

185. We saw evidence of the effect of seller behavior on prices through the Medicaid program in 1991. The Medicaid Rebate Rules contained in the Omnibus Budget Reconciliation Act of 1990[301] provided for Medicaid to receive rebates from pharmaceutical manufacturers in order to lower the effective cost of pharmaceuticals to state Medicaid programs. The rebate was structured in an unusual form. Manufacturers had to give Medicaid a straight discount, or the lowest price given to any customer, whichever resulted in a lower price. In effect, the lowest price a manufacturer offered a buyer became "transparent" to one buyer,

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[298] For example, Anthony Barrueta, Senior Counsel for the Kaiser Foundation Health Plan, concluded: "We believe that price competition can best be achieved when negotiated prices and rebates are kept confidential. Widespread public disclosure of prices is unnecessary to assure that the ultimate payer receives most of the benefit of drug rebate arrangements." FTC/DOJ Joint Hearings, Health Care and Competition Law and Policy, *Pharmacy Benefit Management Companies (PBMs)*, June 26, 2003.

[299] Berndt Report, ¶ 154.

[300] "A Medicare payment system that resulted in price transparency could change the dynamics of the pharmaceutical marketplace, shifting the relative negotiating power of buyers and sellers. A payment method that required Medicare to receive the best price offered by manufacturers to any customer could result in higher prices for other public and private payers....Finally, a system that resulted in lower profits for drug manufacturers could lead to decreased investment in research and development. As a result, fewer new drugs might be developed." 2003 MedPAC Report, p. 161.

[301] P.L. No. 101-508 (1990).

Medicaid. The government hoped this would cause the price Medicaid paid for drugs to decline.

186. Notice that the reaction of sellers tends to offset this price decline, as I discuss above. Because manufacturers had to extend their lowest price to one of their largest purchasers—Medicaid—their own incentives to give large discounts was markedly reduced. The ramification was clear: such a discount no longer applied only to the customer who negotiated it—it also applied to all Medicaid sales, or 13 percent of the market.[302] This made the offer of any such discount to even one customer very expensive for the manufacturer, and thus the manufacturer was unlikely to give it.[303, 304 ,305]

187. I have studied the effect of the Medicaid rebate program, and examined what happened to prices in the year after the implementation of the rebate rules using a detailed dataset of cardiovascular prices from IMS America. I found that branded drugs facing generic competition showed increased average prices of 4 percent

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[302] Scott Morton, Fiona, "The Strategic Response by Pharmaceutical Firms to the Medicaid Most-Favored Customer Rules," *RAND Journal of Economics*, Vol. 28, No.2, Summer 1997, pp. 269–290 ("Scott Morton, Summer 1997") at 271.

[303] This point is detailed in a number of works. See, for example, Cooper, Thomas, "Most-Favored-Customer Pricing & Tacit Collusion," *RAND Journal of Economics*, Vol. 17, No. 3, Autumn 1986, pp. 377–388 at 387; Holt, Charles and David Scheffman, "Facilitating Practices: The Effects of Advance Notice and Best-Price Policies," *RAND Journal of Economics*, Vol. 18, No. 2, Summer 1987, pp. 187–197 at 187–188; Schnitzer, Monika, "Dynamic Duopoly with Best-Price Clauses," *RAND Journal of Economics*, Vol. 25, No. 1, Spring 1994, pp. 186–196 at 187; and Salop, Steven, "Practices that (Credibly) Facilitate Oligopoly Co-ordination," in E. Joseph Stiglitz and G. Frank Mathewson, eds., *New Developments in the Analysis of Market Structure*, Cambridge, MA: The MIT Press, 1986, pp. 265–294 at 273–279.

[304] The Medicaid rebate program illustrates the effects of implementing MFC clauses. For branded drugs, Medicaid was to pay (on net) a fixed percentage of the manufacturer's average price (87.5 percent to start with), or their lowest price to any buyer, whichever was lower. Manufacturers were to submit their average transaction price for each drug to the government—the so-called AMP, or average manufacturer's price. CMS would then determine the rebate to Medicaid due from each firm, if any. See Scott Morton, Summer 1997, p. 272.

[305] If a firm went from giving no discounts to giving, for example, a 25 percent discount on a particular brand to one buyer, then Medicaid would be entitled to that discount also, and the firm's Medicaid rebate payment would increase from the base 12.5 percent of Medicaid sales to 25 percent.

immediately following the imposition of the rebate rules.[306] Others have also studied the effects of the Medicaid rebate program.[307, 308, 309]

188. The Federal Trade Commission has also studied pharmaceutical industry price transparency in evaluating proposed legislation that would affect disclosure of rebates received by PBMs. After studying a California Assembly bill, the FTC concluded such "mandated disclosure of information may increase the cost of pharmaceutical and health insurance premiums by attenuating competition between pharmaceutical companies and by raising the cost of generic substitution and clinical interchange."[310]

189. This historical precedent shows us that the Plaintiffs but-for world, rather than helping payors and final consumers, is likely to result in higher pharmaceutical prices and would therefore harm many members of the class.

D. Additional comments

190. It should be noted that while there is considerable discussion about prices of drugs in the United States compared to drug prices in other countries, the alleged AWP inflation has no bearing on any such differences. A common way to perform a comparison of pharmaceutical prices across countries is to use the prices

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[306] Scott Morton, Summer 1997, p. 288.

[307] The effects of the Medicaid rebate rules have also been examined in a number of government reports, although they take somewhat different approaches compared to my own research. See 1996 CBO Report, pp. xi–xv; GAO, *Effects of Opening Federal Supply Schedule for Pharmaceuticals Are Uncertain*, June 1997, HEHS-97-60, pp. 4, 8; GAO, *Prescription Drugs: Expanding Access to Federal Prices Could Cause Other Price Changes*, GAO-HEHS-00-118, August 2000, p. 6; Cook, Anna, "Strategies for Containing Drug Costs: Implications for a Medicare Benefit, *Health Care Financing Review*, Vol. 20, No. 3, Spring 1999, pp. 29–37 at 34.

[308] In January of 1996, the CBO reported that the number of brands offering large discounts to one or more customers was drastically reduced—from 50 percent to 9 percent—after OBRA 1990 took effect (1991–1994). See 1996 CBO Report, pp. xi–xii.

[309] A broader study of pricing in the industry to HMOs and hospitals could not determine the effect of the Medicaid rebate rules, although the study did not control for any drug characteristics, particularly not the share of the drug sold to Medicaid, nor any changes in supply or demand conditions. See GAO, *Changes in Drug Prices Paid by HMOs and Hospitals Since Enactment of Rebate Provisions*, January 1993, HRD-93-43, pp. 2–3, 6–7.

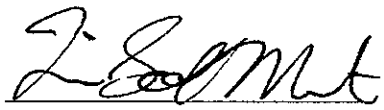
[310] FTC Letter to California Assemblyman, 2004, p. 12.

manufacturers charge to wholesalers,[311] which reflect prices at a single stage of the distribution chain. This practice correctly compares the prices *manufacturers* charge in the different countries, rather than allowing the structure of retail competition (which generally results in varying price concessions and distribution markups) to confound the comparison. Danzon and others[312] who have attempted to carefully evaluate reported comparisons of pharmaceutical prices across countries have generally found that these comparisons overstate the differences in drug prices between the United States and other countries.

[311] Danzon, Patricia M., *Price Comparisons for Pharmaceuticals: A Review of US and Cross-National Studies* (Washington, DC: The AEI Press, 1999), p. 9.

[312] *Ibid.*

I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct.



Fiona Scott Morton
March 22, 2006

Exhibit 1

Fiona M. Scott Morton

School of Management
Yale University
P.O. Box 208200
New Haven, CT 06520-8200

++1.203.432.5569 voice
++1.203.432.6974 fax
fiona.scottmorton@yale.edu

Employment:

2002 - present	Professor of Economics, Yale School of Management
2005 - 2006	Adam Smith Visiting Fellow in Economics, University of Edinburgh, Scotland
2000 - 2002	James L. Frank '32 Associate Professor of Private Enterprise and Management, Yale School of Management
1999 - 2000	Associate Professor of Economics and Strategy, Yale School of Management
1997 - 1999	Assistant Professor of Economics and Strategy Graduate School of Business, University of Chicago
1994 - 1997	Assistant Professor of Strategic Management Graduate School of Business, Stanford University
1991 - 1992	Instructor for Economics 10, Prof. Martin Feldstein, Harvard University

Education:

1994	Massachusetts Institute of Technology, PhD. Economics Thesis title: "Firm Pricing and Entry Decisions" Advisors: Prof. Jerry Hausman, Prof. Nancy Rose
1989	Yale University, B.A. Economics, *magna cum laude* 1987-1988 Clare College, Cambridge University, England

Peer-reviewed Articles:

"Entry and Predation: British Shipping Cartels 1879-1929"
Journal of Economics & Management Strategy:6:4:679-724, 1997

"The Strategic Response by Pharmaceutical Firms to the Medicaid Most-Favored-Customer Rules"
The RAND Journal of Economics:28:2:269-290, 1997

"The Interaction Between a Most-Favored-Customer Clause and Price Dispersion: An Empirical Examination of the Medicaid Rebate Rules of 1990"
Journal of Economics & Management Strategy:6:1:151-174, 1997

"Misclassification of the Dependent Variable in a Discrete-Response Setting"
Joint with Jerry Hausman, MIT, and Jason Abrevaya, University of Chicago
Journal of Econometrics:87:2:239-269, 1998

"Social Status, Entry, and Predation: The Case of British Shipping Cartels 1879-1929"
Joint with Joel Podolny, Yale SOM
The Journal of Industrial Economics:47:1:41-67, 1999

"Barriers to Entry, Brand Advertising, and Generic Entry in the US Pharmaceutical Industry"
International Journal of Industrial Organization:18:7:1085-1104, 2000

Fiona M. Scott Morton

"Entry Decisions in the Generic Pharmaceutical Industry"
The RAND Journal of Economics:30:3:421-440, 1999
"Love or Money? The Effects of Owner Motivation in the California Wine Industry"
Joint with Joel Podolny, Yale SOM
The Journal of Industrial Economics:50:4:431-456, 2002
"Horizontal Integration between Brand and Generic Firms in the Pharmaceutical Industry"
Journal of Economics & Management Strategy:11:1:135-168, 2002
"Internet Car Retailing"
Joint with Florian Zettelmeyer, UC Berkeley and Jorge Silva-Risso, UC Riverside
The Journal of Industrial Economics:49:4, 2001
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"Consumer Information and Discrimination: Does the Internet Affect the Pricing of New Cars to Women and Minorities?"
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"The Role of the Internet in Lowering Prices: Evidence from Matched Survey and Auto Transaction Data"
Joint with Florian Zettelmeyer, UC Berkeley and Jorge Silva-Risso, UC Riverside
Forthcoming in *Journal of Marketing Research*, May 2006

Working Papers:

"Cowboys or Cowards: Why are Internet Car Prices Lower?"
Joint with Florian Zettelmeyer, UC Berkeley and Jorge Silva-Risso, UC Riverside
"A Test of Bargaining Theory in the Auto Retailing Industry"
Joint with Florian Zettelmeyer, UC Berkeley and Jorge Silva-Risso, UC Riverside
"State Casket Sales Restrictions: a Pointless Undertaking?"
Joint with Judy Chevalier, Yale SOM

Research in Progress:

"Scarcity Rents in Car Retailing"
Joint with Florian Zettelmeyer, UC Berkeley and Jorge Silva-Risso, UC Riverside
"Technology Adoption and Organizational Change in the Retail Auto Industry"
Joint with Florian Zettelmeyer, UC Berkeley and Jorge Silva-Risso, UC Riverside

Fiona M. Scott Morton

"The Effect of the Medicare Drug Benefit on Pharmaceutical Prices"
Joint with Mark Duggan, University of Maryland

Other Publications:

"Why Economics has been Fruitful for Strategy"
Financial Times, Mastering Strategy Series, 4 Oct 1999
"Strategic Complements and Substitutes"
Financial Times, Mastering Strategy Series, 8 Nov 1999
"The Problems of Price Controls"
Regulation:24:1, Spring 2001
"Consumer Benefit from Use of the Internet"
NBER Innovation Policy and the Economy:6, 2005

Awards:

2005 - 2008	National Science Foundation Research Grant 0518858http://www.nsf.gov/awardsearch/showAward.do?AwardNumber=0518858 "The Effect of Government Procurement of Pharmaceuticals" Joint with Mark Duggan, University of Maryland
2001 - 2003	National Science Foundation Research Grant 0111885 "The Effect of Internet Car Shopping on Prices and Discrimination" Joint with Florian Zettelmeyer, UC Berkeley
1998 - 2002	National Science Foundation Research Grant 9810178 "Studies of Competition"
1995	Distinguished Teaching Commendation: One of three "second prizes" given by Stanford MBA students for excellence in teaching during the academic year 1994-1995
1993 - 1994	Program on the Pharmaceutical Industry, MIT, grant for full tuition and stipend

Teaching:

Competitive Strategy: Elective MBA course covering topics in I.O. such as price and quantity competition, entry, and antitrust, as well as strategy concepts such as industry analysis, competitive advantage, and sustainability

E-commerce Strategy: Elective MBA course applying microeconomic principles to understand the sources of profit in information technology-based businesses

PhD Students Supervised (PhD institution, year; first placement):

Andrea Coscelli (Stanford GSB, 1998; University College London)
Brian Viard (University of Chicago GSB, 2000; Stanford GSB)
Paris Cleanthous (Yale, 2003; NYU Stern)
Juan Esteban Carranza (Yale, 2004; Wisconsin Madison Econ)
Henry Schneider (Yale, 2006; Cornell)

Fiona M. Scott Morton

Memberships and Professional Service:

American Economics Association
NBER Research Associate, Industrial Organization
First Western Bancorp Inc. (now Sky Bank, Bowling Green, Ohio) Board of Directors (1998-1999)
StreamSage.com Advisory Board (2000-2004)
Economic Policy Panel (2002-2004)
Review of Industrial Organization Editorial Board (2002-2004)
The Journal of Industrial Economics Associate Editor (2003-present)
International Journal of Industrial Organization Co-Editor (2005-present)

Invited Research Presentations Given at:

Dartmouth Econ, MIT Econ, Harvard Econ. Harvard Business School, Yale Econ, Yale Law, Columbia Econ, Columbia Business School, NYU Stern, U. Penn Wharton School, Univ. of Maryland Econ, Univ. of Delaware Econ, Duke Econ, Univ. of Virginia Econ, Carnegie Mellon Heinz School, Northwestern Econ, Northwestern Kellogg GSM, Chicago Econ, Chicago GSB, Purdue Econ, Univ. of Michigan Business School, Washington Univ. St. Louis Olin School, Iowa State Econ, Univ. of Rochester Business School, Cornell Econ, Univ. of Texas at Austin, Univ. of Arizona, Stanford GSB, Univ. of California at Berkeley Haas School, UCLA Econ, Univ. of Toronto Econ (Canada), Univ. of British Columbia (Canada), Queens University (Canada), Univ. of Munich (Germany), Univ. of Linz (Austria), London School of Economics (England), Oxford University (England), Cambridge University (England), Edinburgh University (Scotland), Stirling University (Scotland), European University Institute (Italy), IDEI Toulouse (France)

Conferences (Presenter or Discussant):

Boston University healthcare I.O. conference: 1995, 1999, 2004
Stanford Strategy Conference: 1996, 1997 (organizer), 1999, 2000
Harvard Business School Strategy Conference: 1999, 2004
Economic Policy Conference: 2002 spring and fall, 2003 fall, 2004 fall
American Economics Assn. Meetings: 2001, 2002, 2004, 2005
IO NBER Summer Institute: 1998, 2001 (organizer and presenter), 2003
IO NBER Winter Meetings: 1995, 1996, 2000, 2004
NBER e-commerce group conferences: 2000, 2001
NBER conference on non-profits: 2002
NBER conference on IO of healthcare: 1998
NBER conference on innovation policy: 2005
IDEI (Toulouse) e-commerce conference: 2001, 2003 (co-author presented), 2005
Univ. of British Columbia IO conference: 2004
Behavioral IO conference, WZB Institute Berlin, Germany: 2005

Fiona M. Scott Morton

Referee for:

Review of Economic Studies, Quarterly Journal of Economics, The RAND Journal of Economics, The Journal of Industrial Economics, Journal of Economics & Management Strategy, Journal of Health Economics, Review of Industrial Organization, International Journal of Industrial Organization, American Economic Review, National Science Foundation, *Journal of Law and Economics, Journal of Political Economy, Journal of Law, Economics, and Organization, Marketing Science, Management Science, Strategic Management Journal, Review of Economics and Statistics, Journal of Econometrics, European Economic Review, Berkeley Electronic Journals, The American Journal of Managed Care, Contemporary Economic Policy*

Government Testimony:

FTC hearings, Possible Anticompetitive Efforts to Restrict Competition on the Internet, Auto Panel, October 2002

Selected Consulting Engagements:

Prepared and delivered educational materials for the Court in *In Re Pharmaceutical Industry Average Wholesale Price Litigation, US District Court of Massachusetts, MDL No. 1456, 01-CV-012257-PBS* (2004)

Consultant to FEFC (Far Eastern Freight Conference) on proposed change to EU regulations governing associations of merchant shippers (2004)

Submitted expert report on behalf of Teva USA in IP damages litigation *Abbott Laboratories vs Andrx Pharmaceuticals Inc, and Teva Pharmaceuticals USA, Inc and Roxane Laboratories Inc., US District Court for the Northern District of Illinois Eastern Division, No. 05 C 1490* (2005). Currently retained as consultant for Teva in other antitrust cases (2006).

Retained currently as expert on behalf of fast-track defendants in *In Re Pharmaceutical Industry Average Wholesale Price Litigation, US District Court of Massachusetts, MDL No. 1456, 01-CV-012257-PBS*

I have been retained as expert in several antitrust cases that ended before opinions were submitted, and am also currently retained in other ongoing matters. The types of subjects I have worked on, or am now working on, include: alleged anticompetitive use of biotech patents, alleged anticompetitive effects of pharmaceutical contracts, alleged conspiracy to deter entry, competition between branded and generic pharmaceuticals, and alleged abuse of a dominant position (EU).

Media (major only):

New York Times, April 24, 2003: G:8: col. 3
Business Week, May 13, 2002: 3782: p. 32
CNN TV News, January 2002

Fiona M. Scott Morton

New York Times, December 6, 2001: C:2: col. 1
Wall Street Journal, January 6, 1999: B1

Personal:

Date of Birth: 20 Feb 1967 Sex: Female Citizenship: USA
Marital status: Married to Stephen R. Latham; three children

Updated: 22-Mar-06

Exhibit 2

Materials Relied Upon

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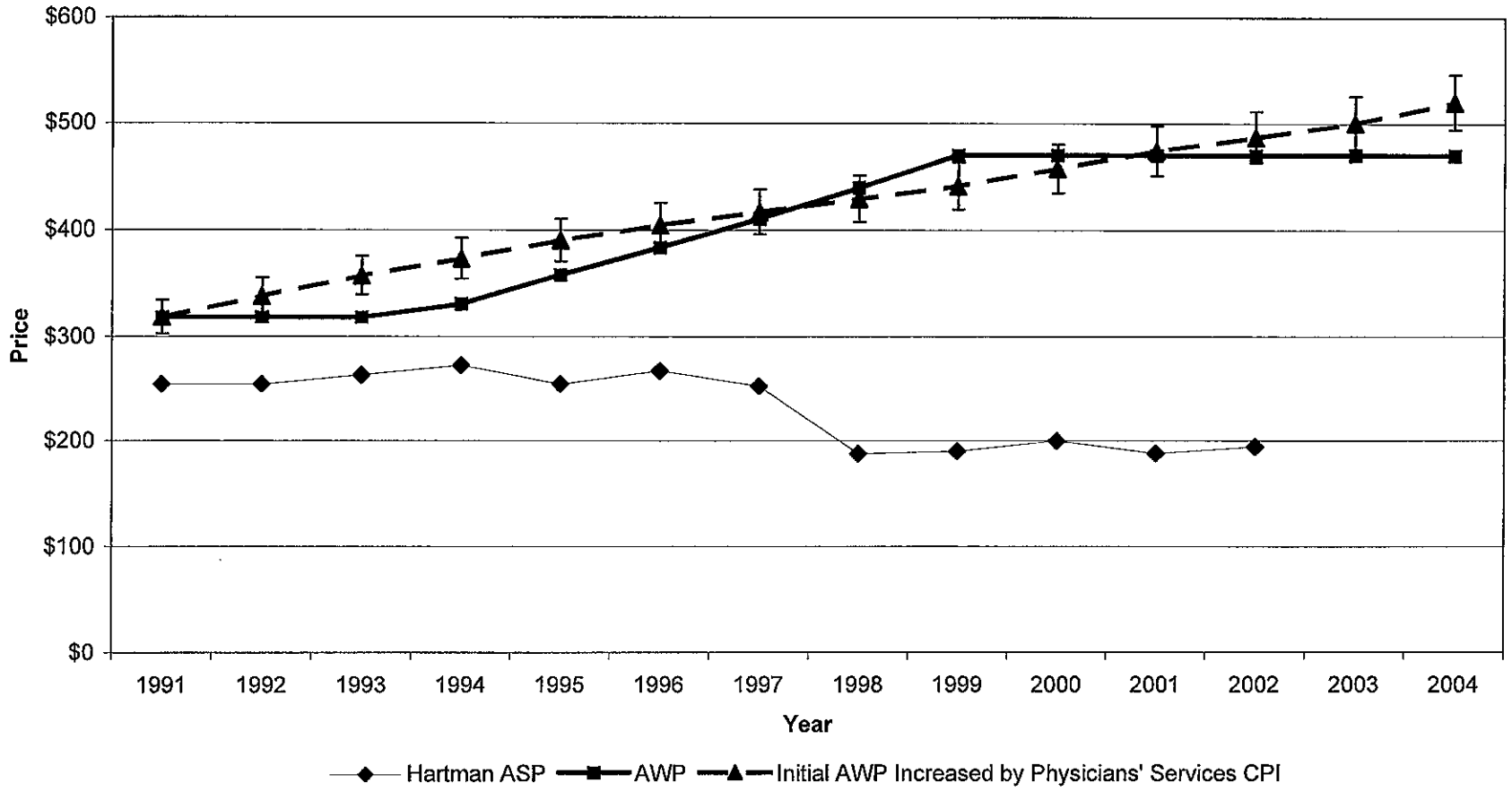
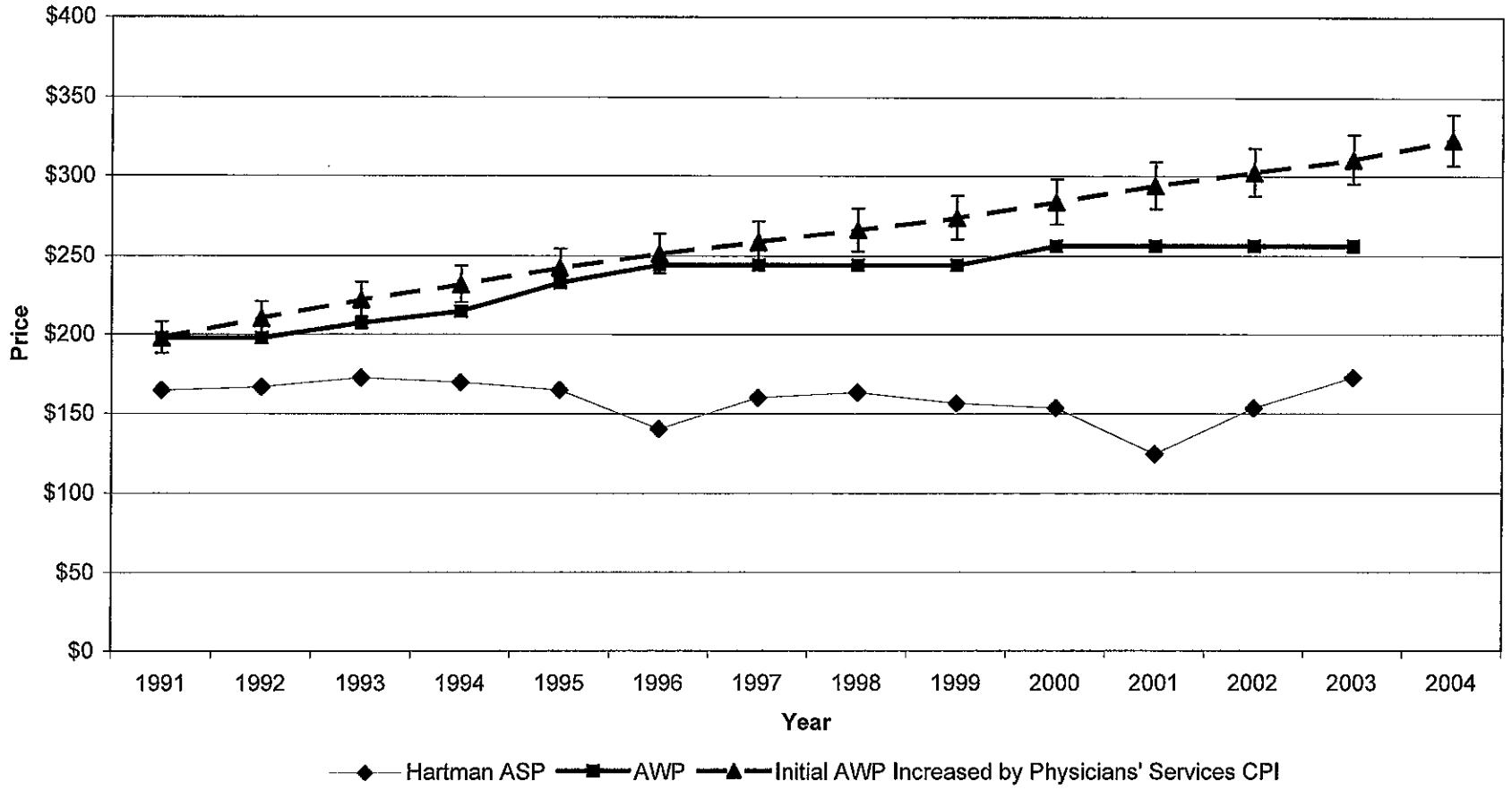
Exhibit 3.1
Zoladex Annual ASP vs. AWP, 1991-2004 (NDC 00310096036)



Notes:
Graph adapted from Hartman Declaration, Dec. 15, 2005, Attachment F, p. 16. Extended to year 2004.
AWP and Hartman ASP as shown in Hartman Declaration, Dec. 15, 2005, Attachment G.1.a and G.1.b.
Initial AWP increased by Physicians' Services CPI. A band of 5% above and below this AWP is shown.

Exhibit 3.2
Zofran Annual ASP vs. AWP, 1991-2003 (NDC 00173044200)



Notes:
Graph adapted from Hartman Declaration, Dec. 15, 2005, Attachment F, p. 4. Extended to year 2004.
AWP and Hartman ASP as shown in Hartman Declaration, Dec. 15, 2005, Attachment G.3.a and G.3.b.
Initial AWP increased by Physicians' Services CPI. A band of 5% above and below this AWP is shown.